

In the Claims

- 1.(currently amended) A thermal barrier coating for a substrate, said coating comprising
a MCrAlY bond coat wherein M is at least one of Ni and Co;
an intermediate crack resistant ceramic coating on said bond coat; and
a vertically cracked top coat of yttria stabilized zirconia on said intermediate coat.
2. (currently amended) A thermal barrier coating as set forth in claim 1 wherein said intermediate coating includes a plurality of pores therein to ~~resistant~~ resist crack propagation.
- 3.(original) A thermal barrier coating as set forth in claim 2 where said intermediate coating includes polyester.
4. .(currently amended) A thermal barrier coating as set forth in claim 1 wherein said intermediate coating has thickness of from 0.002 to ~~0.040~~ 0.010 inch.
- 5.(original) A thermal barrier coating as set forth in claim 2 wherein said intermediate coating has a thickness of from 0.004 to 0.006 inch.
6. (currently amended) A thermal barrier coating as set forth in claim 2 wherein said bond coat has a thickness of from 0.003 to 0.010 inch, said intermediate coating has thickness of from 0.002 to 0.006 inch and said top coat has a thickness of from 0.005 to 0.045 inch.
7. (currently amended) A thermal barrier coating for a substrate, said coating comprising

a bond coat made of ~~a material selected from the group consisting of MCrAlY and NiCoCrAlY;~~

an intermediate crack resistant ceramic coating on said bond coat; and
a vertically cracked top coat of yttria stabilized zirconia on said intermediate coat.

8.(original) A thermal barrier coating as set forth in claim 7 wherein said bond coat contains a reactive element selected from the group consisting of hafnium and silicon.

9.(currently amended) A coated substrate comprising

a substrate;

a bond coat on said substrate comprised of ~~one of~~ a high temperature MCrAlY wherein M is at least one of Ni and Co and ~~NiCoCrAlY~~ and having a thickness of from 0.003 to 0.010 inch;

an intermediate crack resistant ceramic coating containing yttria stabilized zirconia on said bond coat of a thickness of from 0.002 to 0.006 inch; and

a vertically cracked top coat on said bond coat comprised of high temperature yttria stabilized zirconia of a thickness of from 0.005 inches to 0.045 inches.

10.(original) A coated substrate as set forth in claim 9 wherein said substrate is an inner shroud cover plate.

11. (original) A coated substrate as set forth in claim 9 wherein said substrate is one of a turbine rotating blade, turbine bucket, stationary vane and nozzle segment.